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09/919,555	07/31/2001	Herbert F. Cattell	10010326-2	4382

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EXAMINER	
FORMAN, BETTY J	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/919,555	CATTELL ET AL.	
	Examiner	Art Unit	
	BJ Forman	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-16 and 45-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-16 and 45-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

FINAL ACTION

Status of the Claims

1. This action is in response to papers filed 4 October 2007 in which claims 1-2, 10, 47-48 were amended. The amendments have been thoroughly reviewed and entered.

The previous rejections in the Office Action dated 9 July 2007 under 35 U.S.C. 112, second paragraph are withdrawn in view of the amendments. The previous rejections under 35 U.S.C. 102(e) and 35 U.S.C. 103(a) are maintained as reiterated below. Applicant's arguments have been thoroughly reviewed and are discussed below.

Claims 1-2, 4-16, 45-54 are under prosecution.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-16, 45-54 are provisionally rejected under 35 U.S.C. 102(e) as being anticipated by Cattell (U.S. Patent Application Publication No. 2002/0102559, filed 31 January 2001).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37

CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1 and 47, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample saving in a memory array related data comprising machine readable (e.g. bar code, ¶ 40) instructions for reading the array and/or instruction of processing the array; and shipping the fabricated array and forwarding the array related data to a location remote from where the array is fabricated (¶ 6) wherein the instructions for reading or processing the array includes information regarding feature errors which are detected, communicated to the fabrication station and added to the memory before subsequent users expose the arrays to a sample (¶ 45 and Fig. 6) wherein during array fabrication information required for reading and processing the array (e.g. missing features, misplaced feature, features of incorrect dimension, other physical characteristics) is stored such that the person reading data from the array will interpret the data correctly (¶ 5, 11, 15, 41, 45).

Cattell further discloses retrieving array related data from a memory (e.g. updated feature characteristics) and automatically selecting algorithms based on the data (e.g. skip a updated feature) and at the user station, reading the array and processing the array according to the algorithms (¶ 43-44).

Regarding Claim 2 and 48, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample saving in a memory array related data comprising machine readable (e.g. bar code, ¶ 40) instructions for reading the array or instruction of processing the array; wherein array related data is saved in association with an identifier (i.e. bar code, ¶ 40); applying the

identifier to the substrate or housing carrying the substrate; and shipping the fabricated array and forwarding the array related data to a remote location (¶ 39-41) wherein the instructions for reading or processing the array includes information regarding feature errors which are detected, communicated to the fabrication station and added to the memory before subsequent users expose the arrays to a sample (¶ 45 and Fig. 6) and wherein during fabrication information required for reading and processing the array (e.g. missing features, misplaced feature, features of incorrect dimension, other physical characteristics) is stored such that the person reading data from the array will interpret the data correctly (¶ 5, 11, 15, 41, 45).

Cattell further discloses retrieving array related data from a memory (e.g. updated feature characteristics) and automatically selecting algorithms based on the data (e.g. skip a updated feature) and at the user station, reading the array and processing data according to the algorithms (¶ 43-44).

Regarding Claim 4 and 49, Cattell discloses the method wherein the chemical moieties are biopolymers (¶ 24).

Regarding Claim 5 and 50, Cattell discloses the method wherein the biopolymers are DNA (¶ 24).

Regarding Claim 6 and 51, Cattell discloses the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (¶ 36- 40).

Regarding Claim 7 and 52, Cattell discloses the method wherein the memory comprises a portable storage medium, the method further comprising shipping the portable medium to a remote location e.g. bar codes illustrated in Fig. 1, # 356 and 358 (¶ 40 and Fig. 6).

Regarding Claim 8 and 53, Cattell discloses the method wherein the portable storage medium is shipped to the same remote location as the array (¶ 40 and Fig. 6).

Regarding Claim 9 and 54, Cattell discloses the method further comprising applying a communication address to the substrate or housing wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (¶ 40).

Regarding Claim 10, Cattell discloses a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample saving in a memory array related data said data comprising machine readable (e.g. bar code, ¶ 40) instructions for reading the array or instruction of processing the array; wherein array related data is saved in association with a map identifier; applying the identifier to the corresponding substrate or housing carrying the corresponding substrate; and shipping the fabricated array and forwarding the array related data to a remote location (¶ 27 and 40) and wherein during fabrication information required for reading and processing the array (e.g. missing features, misplaced feature, features of incorrect dimension, other physical characteristics) is stored such that the person reading data from the array will interpret the data correctly (¶ 5, 11, 15, 41, 45).

Cattell further discloses retrieving array related data from a memory (e.g. updated feature characteristics) and automatically selecting algorithms based on the data (e.g. skip a updated feature) and at the user station, reading the array and processing data according to the algorithms (¶ 43-44).

Regarding Claim 11, Cattell discloses the method wherein the chemical moieties are biopolymers (¶ 24).

Regarding Claim 12, Cattell discloses the method wherein the biopolymers are DNA (¶ 24).

Regarding Claim 13, Cattell discloses the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory

and communicating the data to a remote locations in response to receiving a communication of associated identifiers from the remote location (¶ 36-40).

Regarding Claim 14, Cattell discloses the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium the method additionally comprising shipping the portable storage mediums to multiple remote locations (¶ 40 and Fig. 6).

Regarding Claim 15, Cattell discloses the method wherein each of the portable storage mediums are shipped with the corresponding fabricated array to the same remote location from which the set of biopolymers used in fabricating the array was received (¶ 40 and Fig. 6).

Regarding Claim 16, Cattell discloses the method further comprising applying a same communication address to each of the substrates or housings wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (¶ 40).

Regarding Claim 45-46, Cattell discloses the method wherein the array related data includes an indication as to whether a particular type of control probe is present i.e. the data includes "any biological information on an array feature" (¶ 39 e.g. complement). Because a control probe is biological and because the data of Cattell includes any biological information, the data of Cattell includes an indication as to whether a particular type of control probe is present.

Response to Arguments

Applicant asserts that the Examiner has stated that the claims do not distinguish over the above Cattell reference because the information that is saved and retrieved is not to be afforded patentable weight in view of the decision by the Board. Applicant further asserts that the added steps of e) reading the array and f) processing data were also not afforded any weight based on the decision of the Board. The assertion is noted. However, the previous rejection addressed the limitations of reading the array and processing data. See discussions and

citations above regarding the independent claims. Cattell clearly teaches reading the array at the user station and processing data from the reading step (see below). It is further noted, that it is not possible to read data without obtaining information and it is not possible to process data without obtaining data. Hence, reading an array inherently obtains data and processing data inherently obtains a result.

> [0043] At the user station of FIG. 5, the resulting package 340 is then received from the remote fabrication station. A sample, for example a test sample, is exposed to the array 12 on the array unit 15 received in package 340. Following hybridization and washing in a known manner, the array unit 15 is then inserted into holder 161 in scanner 160 for reading of the array (such as information representing the fluorescence pattern on the array 12). The array identifier is also machine read by the reader 163 in scanner 160 reading (501) the bar code 356 present on the array substrate 10 in association with the corresponding array 12, while the array unit 15 is still positioned in retained in holder 161. Using read identifier 356 (or biopolymer identification information), processor 162 may then retrieve (502) the first set of feature characteristic data for the array either from portable storage medium 324b or from the database of such information in memory 141 by communicating the array identifier to that database through communication module 164 and communication channel 180 and receiving the corresponding first set of feature characteristic data in response. In the latter situation, processor 162 may obtain the communication address of communication module 144 by which to access memory 141 (or the address of another database carrying the identity map and associated identifier of array 12), from a communication address in identifier 356 or by accessing a database of manufacturer's communication addresses based on the read array identifier (either from a local memory or by communication with a remote database). Processor 162 may retrieve (504) the updated set of feature characteristic data (470) in any of the same ways the first set of feature characteristic data is obtained, although this may be obtained at the same, earlier, or later time. The retrieved first and updated sets may optionally be merged by replacing feature characteristic data from the first set for a given feature with corresponding data from the update set when the first set data conflicts with the updated set data. For example, if the first set indicates a particular feature is present and the updated set indicates that it is not, the merged data indicates that feature is not present. Thus, when use of the first and updated sets is referenced in reading or processing read data from the array, this may be done by way of using the merged data.
>
> [0044] The array in array unit 15, while still positioned in holder 161, may be read to obtain read results. Processor 162 may cause the array to be read, or the data obtained from reading to be processed (which term includes interpretation of data), (510) using the retrieved first and updated feature characteristic sets. For example, if the sets together indicate a particular feature is missing or severely defective

then the scanner may simply avoid reading such a feature at all. Alternatively, the read data from such a feature may simply be deleted or ignored in any subsequent processing, or processed results flagged as possibly being in error due to that defective feature. As mentioned, the first and/or updated sets may include biopolymer identification information, and this can also be used to retrieve an additional updated set of array feature characteristic data from one or more other local or remote locations (by communication of the biopolymer identifications and receiving in response, the updated set). Results from the array reading can be processed results, such as obtained by rejecting a reading for a feature which is below a predetermined threshold and/or forming conclusions based on the pattern read from the array (such as whether or not a particular target sequence may have been present in the sample). The results of the reading (processed or not) can be forwarded (such as by communication) to be received at a remote location for further evaluation and/or processing, or use, using communication channel 180 or reader/writer 186 and medium 190. This data may be transmitted by others as required to reach the remote location, or re-transmitted to elsewhere as desired.

4. Claims 1, 2, 4-16 and 47-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Cattell, H. (U.S. Patent No. 6,180,351, filed 22 July 1999).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding Claim 1 and 47, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array (Column 2, line 60-Column 3, line 5 and Claim 1); before the array has been exposed to a sample saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 5, lines 41-48); and shipping the fabricated array and forwarding the array related

data to a remote location (Column 3, line 55-Column 4, line 9 and 33-43 and Claims 10-11) and wherein the array comprises machine readable identifier containing information regarding processing and/or reading the array (Column 5, lines 41-48 and Column 12, lines 18-35).

Cattell further discloses retrieving array related data from a memory (e.g. unique identifier) and automatically selecting algorithms based on the data (e.g. skip a specific address) (Column 11, line 61-Column 12, line 35). Cattell further teaches reading the array and processing data at the user location (Column 11, line 61-Column 12, line 35).

Regarding Claim 2 and 48, Cattell discloses a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array (Column 2, line 60-Column 3, line 5 and Claim 1); before the array has been exposed to a sample saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 5, lines 41-48; wherein array related data is saved in association with an identifier (Column 4, lines 33-43); associating the identifier with the array (Column 4, lines 34-37 and Claim 12); and shipping the fabricated array and forwarding the array related data to a remote location (Column 3, line 55-Column 4, line 9 and Claims 10-11) and applying the identifier to the substrate or housing carrying the substrate (Column 3, line 64-Column 4, lines 2) and wherein the array comprises machine readable identifier containing information regarding processing and/or reading the array (Column 5, lines 41-48 and Column 12, lines 18-35).

Cattell further discloses retrieving array related data from a memory (e.g. unique identifier) and automatically selecting algorithms based on the data (e.g. skip a specific address) (Column 11, line 61-Column 12, line 35). Cattell further teaches reading the array and processing data at the user location (Column 11, line 61-Column 12, line 35).

Regarding Claim 4 and 49, Cattell discloses the method wherein the chemical moieties are biopolymers (Column 2, lines 60-64 and Claim 3).

Regarding Claim 5 and 50, Cattell discloses the method wherein the biopolymers are DNA (Column 2, lines 60-64 and Claim 4).

Regarding Claim 6 and 51, Cattell discloses the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (Column 3, lines 28-43 and Column 12, lines 39-43).

Regarding Claim 7 and 52, Cattell discloses the method wherein the memory comprises a portable storage medium, the method further comprising shipping the portable medium to a remote location e.g. bar codes illustrated in Fig. 4, # 356 and 358 (Column 9, lines 65-Column 10, line 4).

Regarding Claim 8 and 53, Cattell discloses the method wherein the portable storage medium is shipped to the same remote location as the array (Column 9, lines 65-Column 10, line 4).

Regarding Claim 9 and 54, Cattell discloses the method further comprising applying a communication address to the substrate or housing wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (Column 10, line 65-Column 50).

Regarding Claim 10, Cattell discloses a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array (Column 2, line 60-Column 3, line 5 and Claim 1); before the array is exposed to a sample saving in a memory array related data said data comprising, instructions for reading the array or instruction of processing the array (Column 5, lines 41-48); wherein array related data is saved in association with a map identifier (Column 4, lines 33-43); applying the identifier to the corresponding substrate or housing carrying the corresponding substrate (Column 4, lines 34-37 and Claim

12); and shipping the fabricated array and forwarding the array related data to a remote location (Column 3, line 55-Column 4, line 9 and Claims 10-11 and Claim 14) and wherein the array comprises machine readable identifier containing information regarding processing and/or reading the array (Column 5, lines 41-48 and Column 12, lines 18-35).

Cattell further discloses retrieving array related data from a memory (e.g. unique identifier) and automatically selecting algorithms based on the data (e.g. skip a specific address) (Column 11, line 61-Column 12, line 35). Cattell further teaches reading the array and processing data at the user location (Column 11, line 61-Column 12, line 35).

Regarding Claim 11, Cattell discloses the method wherein the chemical moieties are biopolymers (Column 2, lines 60-64 and Claim 3).

Regarding Claim 12, Cattell discloses the method wherein the biopolymers are DNA (Column 2, lines 60-64 and Claim 4).

Regarding Claim 13, Cattell discloses the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory and communicating the data to a remote locations in response to receiving a communication of associated identifiers from the remote location (Column 3, lines 28-43 and Column 12, lines 39-43).

Regarding Claim 14, Cattell discloses the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium the method additionally comprising shipping the portable storage mediums to multiple remote locations (Column 9, lines 65-Column 10, line 52 and Claim 14)

Regarding Claim 15, Cattell discloses the method wherein each of the portable storage mediums are shipped with the corresponding fabricated array to the same remote location from which the set of biopolymers used in fabricating the array was received (Column 3, line 55-Column 4,line 10).

Regarding Claim 16, Cattell discloses the method further comprising applying a same communication address to each of the substrates or housings wherein the address identifies a remote location from which the identity map will be communicated in response to a received communication of the associated map identifier (Column 10, line 65-Column 50 and Claim 14 (d) shipping each of the fabricated arrays....**to one** or more of the remote locations, lines 36-63).

Response to Arguments

Applicant asserts that the Examiner has not pointed to a teaching in the '351 patent for the added steps of e) reading the array and f) processing data. The assertion is noted, however, as cited above, the reference clearly teaches reading the array and processing data.

> 19) At the user station, the resulting package is then received from the remote fabrication station. Second reader 182 is used to read from package 340 the second copy of the local identifier 356. In this case, the corresponding unique identifier 358 is retrieved by second reader 182 also reading it from the package. These are stored in memory 184 in association with one another. A sample, for example a test sample, is exposed to the array 12 on the array unit 15 received in package 340. The array is then inserted into scanner 160 and interrogated by it to obtain interrogation results (such as information representing the fluorescence pattern on the array 12). The first reader also reads the first copy of the local identifier 356 present on the array substrate 10 in association with the corresponding array 12. Processor 162 retrieves the array layout information for the array corresponding to this read first copy of the local identifier 356, by accessing from memory 184 the corresponding unique identifier (which was previously saved in association with the corresponding unique identifier). From the unique identifier, processor 184 can obtain the array layout information since the array layout information was also previously saved in memory 184 in association with the corresponding unique identifier.
>
> (20) Once processor 162 has the array layout information corresponding to the read first copy of the local identifier 356, it can then control interrogation of the corresponding array by scanner 160 using such information and/or processing scan information to obtain feature information which is then associated with the layout information. For example, the array layout information could indicate that the scanner need not interrogate specific array addresses for a given test, or alternatively information read from that address can be ignored. Following array interrogation, the test sample can be evaluated for the presence of a target based on the results of the interrogation, either by processor 162 or by a user examining the interrogation results. The results of the evaluation, or alternatively

> the interrogation results (processed or raw data), could be forwarded to a remote location for further evaluation and/or processing using communication channel 180 or reader/writer 186 and medium 190.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4-16 and 47-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perttunen et al (U.S. Patent No. 5,968,728, issued 19 October 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000).

Regarding Claim 1 and 47, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping

address contained in the machine readable information (¶ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading and processing by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Regarding Claim 2 and 48, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array related data is saved in association with an identifier i.e. id code; wherein the identifier is associated with the array by applying the identifier to the substrate or housing carrying the substrate (Column 4, line 61-Column 5, line 7 and Fig. 10-12) (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping

address contained in the machine readable information (¶ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading and processing by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Regarding Claim 4 and 49, Perttunen et al teach the method wherein the chemical moieties are biopolymers (Column 4, lines 13-26).

Regarding Claim 5 and 50, Perttunen et al teach the method wherein the biopolymers are DNA (Column 4, lines 13-26).

Regarding Claim 6 and 51, Perttunen et al teach the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (Column 8, lines 38-54).

Regarding Claim 7 and 52, Perttunen et al teach the method wherein the memory comprises a portable storage medium e.g. bar code, the method further comprising shipping the portable medium to a remote location to the end user (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146).

Regarding Claim 8 and 53, Perttunen et al teach the method wherein the portable storage medium is shipped to the same remote location as the array i.e. user (Column 8, lines 35-42).

Regarding Claim 9 and 54, Perttunen et al teach the method wherein the substrate has applied thereto array related data e.g. identification code (Column 8, lines 1-19) but they do not

teach the identification code comprises a communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be communicated i.e. customer (¶ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Perttunen et al to thereby identify customer via the address as taught by Ellison et al (¶ 8).

Regarding Claim 10, Perttunen et al teach a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array related data is saved in association with an identifier i.e. id code; applying the identifier to the corresponding substrate or corresponding housing (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (¶ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply

the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading and processing by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Regarding Claim 11, Perttunen et al teach the method wherein the chemical moieties are biopolymers (Column 4, lines 13-26).

Regarding Claim 12, Perttunen et al teach the method wherein the biopolymers are DNA (Column 4, lines 13-26).

Regarding Claim 13, Perttunen et al teach the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory and communicating the data to a remote locations in response to receiving a communication of associated identifiers from the remote location Column 8, lines 38-54).

Regarding Claim 14, Perttunen et al teach the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium wherein the array is used by an end user (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) but they do not specifically teach shipping the portable storage mediums to multiple remote locations. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (¶ 8). It would have been obvious to

one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Regarding Claim 15, Perttunen et al teach the method wherein each of the portable storage mediums and the corresponding fabricated array are used by the at the same remote location i.e. end user from which the set of biopolymers used in fabricating the array was received (Column 7, line 40-Column 8, line 62).

Regarding Claim 16, Perttunen et al teach the method wherein each of the substrates comprise an identification code which identifies array related data e.g. identification code (Column 8, lines 1-19) but they do not teach the identification code comprises a communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be communicated i.e. customer (¶ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Perttunen et al to thereby identify customer proving the array samples via the address as taught by Ellison et al (¶ 8) for the obvious benefits of maintaining correct correlations between the customer and the array.

7. Claims 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perttunen et al (U.S. Patent No. 5,968,728, issued 19 October 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000) as applied to Claims 1

and 2 above and further in view of Zelany et al (U.S. Patent No. 6,215,894, filed 26 February 1999).

Regarding Claims 45 and 46, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (¶ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al teach the method wherein the array related data generates mappings of the array and directs operation of the scanning system (Column 3,lines 54-67) but they do not specifically teach that the data includes an indication as to whether a particular type of control probe is present on the array. However, control probes were well known in the art at the time the claimed invention was made as taught by Zelany et al who teach that the control probes are useful for calibrating and adjusting the scanner thereby facilitating scanning (Column 3,

lines 19-25). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the data of Perttunen et al by including data as to whether a control probe is present on the array for the expected benefit of adjusting and calibrating the scanner as taught by Zelany et al (Column 3, lines 19-25).

Response to Arguments

Applicant asserts that combination of the cited references does not provide all of the claimed elements i.e. reading the array and processing data based on the reading. However, it is maintained that the reading and data processing at user locations is obvious as cited above. Specifically, Perttunen et al teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading data and processing the data read by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

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For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

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Art Unit: 1634
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